

REMARKS/ARGUMENTS

Prior to this Amendment, claims 1-7, 9-11, and 17-20 were pending in this application. No claim amendments are presented with this Amendment with the Listing of Claims being provided to facilitate review of the pending claims by the Examiner.

Review Prosecution Progress

The December 29, 2005 Office Action was a first Office Action after Applicants filed an Appeal Brief on October 12, 2005. The December 29, 2005 Office Action did not cite any new references in rejecting all the claims, but it stated that new grounds of rejections were being presented.

One of the new rejections was an indefiniteness rejection of claims 1-7, 9-11, and 17-20. These claims were not amended in the last Amendment filed on July 17, 2005, and the language that the Examiner now finds indefinite should have been objected to long before Applicants filed an Appeal Brief.

Another one of the "new" rejections involved the use of a reference that had previously been cited as a secondary 35 U.S.C. §103 reference (i.e., the Axberg reference) as now supporting a 35 U.S.C. §102 reference (even though the claims have not been amended to broaden their scope). The Axberg reference had been cited in conjunction with several other primary references beginning with the June 28, 2004 Office Action. Applicants have shown in each of their responses why the Axberg reference did not support a rejection of the claims even when combined with several differing primary references.

The present Office Action withdraws the rejections based on Axberg, and Applicants appreciate this step by the Examiner.

Request for Withdrawal of Finality of June 14, 2006 Office Action

Applicants prior Amendment presented claim amendments to further clarify the language of the claims and address indefiniteness rejections by the Examiner. In other words, the claim amendments did not present new issues that caused the

Examiner to perform an additional search. However, the claims now stand rejected under 35 U.S.C. §102 as being anticipated by a reference that is being presented for the first time in the application. Note, this is after 2 years of prosecution including the filing of an Appeal Brief. Hence, Applicants believe the finality of the claim rejections based on this new reference is premature and request that the June 14, 2006 be characterized as a second non-final rejection (after the filing of an Appeal Brief).

Rejections of Claims Under 35 U.S.C. §112

In the Office Action, the Examiner rejected claims 7 and 9-11 under 35 U.S.C. §112, second paragraph, as being indefinite. Applicants traverse this rejection as they believe the claim is definite with the existing language and meets the requirements of 35 U.S.C. §112, second paragraph.

The Office Action asserts that it is not clear from the claim language “why a recommended configuration is sent from the remotely located reconfiguration system to the client data storage system before a reconfiguration request is received from the client data storage system.” The method 200 shown in Figure 2 shows just such a situation in which a remotely located reconfiguration system acts to monitor 210 a client system and “Recommend Reconfiguration” without first being requested (which is shown in the alternative path at 220 where the monitored client or system ask for assistance). Such “preemptive reconfiguration recommendations” are discussed in the specification beginning at page 12, line 29 and are said to be transmitted on an ongoing basis or periodically “to optimize or enhance operation of the client data storage system 140” (of Figure 1).

The Office Action further says claim 1 is indefinite because it is not clear “who performs the monitoring.” It is not presently a limitation which device or component performs the monitoring as this is not a limitation that is required to define the invention or distinguish the method from the cited references. In other words, the monitoring of claim 7 may be performed in a number of ways and be covered by the breadth of the claim language (e.g., the monitoring may be

performed by "a monitoring routine implemented in the reconfiguration server 112" as discussed at page 13, lines 5 and 6, which would result in monitoring being done at the remotely-located reconfiguration system with data being transmitted from the client data storage system). The Office Action further states that is unclear in claim 7 "why a recommended reconfiguration is sent and what the purpose or impact the recommended configuration has on the claimed invention." Again, "why" is not believed to be a requirement for definiteness as it is presently clear that a recommendation is transmitted from the remotely-located reconfiguration system based on monitoring of the client data storage system. There is no indefiniteness in the claim language, with further claim limitations not making the method more clear but simply narrowing the coverage.

Further, the Office Action said the language is indefinite because it is now unclear "what the purpose or impact the recommended configuration has on the claimed invention." Claim language is not indefinite if it excludes intended purpose or function language and such language is often objected to during prosecution of claims or at least not given patentable weight. However, it may be inferred from the existing claim language that the reconfiguration request from the client data storage system may be a result of the transmitted recommendation (such as is the case in block 214) but this is not a requirement of the claim language (see also block 220 of Figure 2). However, such broader coverage does not make the language indefinite as the claim language of claim 7 defines the invention (or portions of the invention) shown in the process 200 of Figure 7 in a manner that allows readers of the claim to understand with particularity what method is being claimed as the Applicants' invention.

For these reasons, Applicants request that the rejection of claims 7 and 9-11, which depend on claim 7, based on indefiniteness be withdrawn.

Rejections of Claims Under 35 U.S.C. §102

In the June 14, 2006 Office Action, claims 1-5, 7, 9-10, and 17-20 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 6,480,901 ("Weber"). This rejection is traversed based on the following remarks.

Claim 1 is directed to a remote configuration computer system that includes a storage management host installed in a client data storage system. The data storage system has a first configuration, and the storage management host provides remote access and a communication link to the master storage unit and host of the data storage system. The system further comprises a reconfiguration center located remote to the storage management system. The reconfiguration center **receives a reconfiguration request and in response transfers a logical implementation "selected or created based on the reconfiguration request and the first configuration" to the client data storage system "via the storage management host."** Weber fails to teach or suggest a system for remote reconfiguring of a data storage system as called for in claim 1, and Applicants request that this rejection be withdrawn.

Specifically, claim 1 calls for the remote reconfiguration center to receive a reconfiguration request from the client data storage system. The Office Action cites Weber at Figure 4, col. 4, line 62 to col. 5, line 2 and at col. 6, lines 1-15 for teaching this limitation. Initially, it should be understood that Weber is directed toward management stations that can access varying controller interfaces to allow it to manage operation of a plurality of varying storage devices via their varying controllers. Hence, Weber teaches a device that may be used within an enterprise to be by a system administrator to manage all the networked storage devices. However, Applicants' invention is directed more toward servicing client or remote systems based on monitored operation and configurations and responding to reconfiguration requests or providing reconfiguration requests, which would not be a problem that is addressed by Weber.

Particularly, in Figure 4, Weber shows a management station that is useful for providing control commands to a RAID system 404 via network 402, but there is no teaching of the management device 406 "receiving a reconfiguration request for the client data storage system from the client data storage system" as called for in claim 1. At col. 4, line 62 to col. 5, line 2, Weber teaches that its management stations may be remotely attached to the network 102 to manage storage devices remotely, but there is no showing of receiving a reconfiguration request from a data storage system. Finally, at col. 6, lines 1-15, Weber states that the management stations 112, 120 "can issue management commands directly to storage controller 142 via network 102..." but there is no discussion that these commands are sent in response to receiving reconfiguration requests from the data storage systems or storage controllers. For this reason alone, Weber fails to anticipate the system of claim 1, and Applicants request that the rejection of claim 1 based on Weber be withdrawn.

Further, claim 1 calls for the logical implementation to be "selected or created based on the reconfiguration request and the first configuration." As there is no reconfiguration request, any commands sent from the management stations in Weber cannot be based on such a request. Additionally, the logical implementation is also based on the first configuration. Weber provides no teaching that it is useful or desirable to select or create a logical implementation defining a second configuration based on the first or existing configuration of its managed devices. The Office Action cites Weber at col. 23, line 10 to col. 24, line 25 for providing this teaching. However, Weber at this citation teaches the use of object graphs to show changes in configuration of a managed storage system with "deltas" being used to show the changes. But, this does not teach that Weber's management stations or software therein generates a logical implementation that is transferred to the client data storage system based on the reconfiguration request AND the first configuration. It only teaches a method of tracking changes after a configuration of a system is completed. Hence, the cited portions of Weber fail to teach that the logical implementation is based both on the reconfiguration request and on the first

or existing configuration of the client data storage system. For this additional reason, claim 1 is not anticipated by Weber.

Claims 2-5 depend from claim 1 and are believed allowable for at least the reasons for allowing claim 1.

Claim 7 is directed to a method for remotely reconfiguring a data storage system that includes: monitoring a client data storage system, based on such monitoring transmitting a recommended reconfiguration for a monitored master storage unit, receiving a reconfiguration request, in response to the request determining the first configuration of the master storage unit, and then transferring a logical implementation for executing to reconfigure the master storage unit that is generated based on the reconfiguration request, the first configuration, and the results of the monitoring. Claim 7 has similar limitations to claim 1, but that are written in method form, and as a result, the reasons provided for allowing claim 1 over Weber are believed applicable to claim 7.

Further, claim 7 calls for receiving a reconfiguration request and determining a first configuration of a master storage unit. Weber fails to teach the receiving as discussed with reference to claim 1 and also, fails to teach the determining in response to a request. Claim 7 is rejected for the reasons provided for rejecting claim 1; however, claim 1 did not call for determining a first configuration based on a request for reconfirmation. Hence, the Office Action fails to state a proper prima facie case of anticipation as it has not provided a specific citation for each and every limitation of claim 7. Applicants request that the rejection be withdrawn or a citation to Weber showing such determining of a configuration in response to a reconfiguration request.

Further, Weber fails to teach "based on the monitoring, transmitting from the remotely-located reconfiguration system a recommended reconfiguration for the master storage unit to the client data storage system." Again, claim 7 is only rejected for the reasons provided for claim 1, but claim 1 does not call for transmitting a recommended reconfiguration of the master storage unit." Weber teaches transmitting commands to storage controllers from a management station

but not providing a recommended reconfiguration based on monitoring and not of a master storage unit of a storage system. A proper anticipation rejection has not been stated, yet, and Applicants do not believe Weber supports an anticipation rejection of claim 7 for this additional reason.

Claim 9 depends from claim 7 and is believed allowable over Weber at least for the reasons provided for claim 7. Further, claim 9 calls for **determining a level of reconfiguration services and creating the logical implementation based on the identified level**. Weber fails to teach or suggest the utilization of levels of service with regard to generating reconfiguration logical implementations. The level of configuration services concept is described in detail beginning at page 14, line 29 of Applicants' specification, and this concept as described or as claimed in Claim 9 are not shown or suggested by Weber. The Office Action cites Weber at col. 7, lines 49-52, but at this citation, Weber mentions updating software to a new level. This is NOT what is called for in claim 9, as a level of software does not teach "a level of reconfiguration services" or creating a logical implementation defining a second configuration based on such an identified level (e.g., how would one decide what configuration to implement at a data storage system based on a change in the level of its interface software?). For this additional reason, claim 9 is allowable over Weber.

Claim 10 defines what is meant by "service level options" and depends from claim 9. Weber fails to discuss such service level options, and claim 10 was rejected for the same citations as claims 5 and 18. Weber is cited at col. 5, lines 5-16 presumably because "RAID" systems are discussed. But, there is no discussion whatsoever of "service level options" and how they may be used in configuring a data storage system. For these additional reasons, claim 10 is allowable over Weber.

Independent claim 17 is directed to a method of remotely reconfiguring a data storage system. The method of claim 17 calls for a reconfiguration system to receive a reconfiguration request, to determine a first configuration of a data storage system associated with the request, to identify a "level of configuration

services” for the data storage system, and to define a logical implementation for the data storage system based on the identified level of service and based on the first configuration. The logical implementation is then transferred to the storage management host installed on the data storage system and executed to reconfigure the master storage unit. The reasons provided for allowing claim 7 over Weber are believed applicable to claim 17.

Additionally, Weber fails to show the feature of defining a logical implementation of a reconfiguration based on an identified level of service and on a first configuration as discussed with reference to dependent claim 9. The term “level of service” is defined in Applicants’ specification at least in the paragraph beginning at page 15, line 12, and the use of such levels of service to determine/define how a system is to be reconfigured is not taught or suggested by Weber. Hence, Weber fails to teach each and every limitation of claim 17 as required under 35 U.S.C. §102.

Claims 18-20 depend from claim 17 and are believed allowable for at least the reasons provided for allowing claim 17. Further, claim 18 defines what is meant by “service level options” and is believed allowable over Weber for the reasons provided for allowing claim 10.

Rejections of Claims Under 35 U.S.C. §103

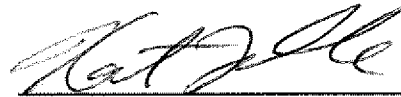
In the Office Action, claims 6 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Weber in view of Official Notice. Claims 6 and 11 depend from claim 1 and claim 7 and are believed allowable as depending from an allowable base claim. Further, “Official Notice” fails to overcome the deficiencies of Weber discussed above with reference to claims 1 and 7.

Conclusions

Based on the above remarks, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

No fee is believed due for this submittal. However, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,



July 25, 2006

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